

# For 3rd overtone oscillation Low phase noise type KH9705ALy

## Overview

KH9705ALy is composed of an oscillation amplifier and a three-state output buffer. The amplifier is featured with optimized feedback resistor to contribute to a wide operating range with VDD(2.7 to 5.5V). ESD and latch-up test have complied with AEC-Q100 standard.

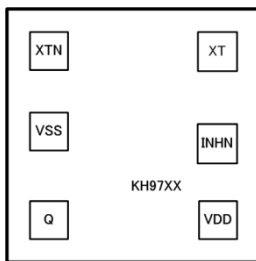
## Features

Operating Voltage	$f_o \leq 107\text{MHz}$	2.25 to 3.6V
	$f_o \leq 133\text{MHz}$	2.7 to 5.5V
Operating Temperature		-40 to 85°C
Standby Mode	INH="L"	Q Output "Hi-z"
		Oscillation Stopped
INH Input Voltage Level		C-MOS
Q Output Duty Level		C-MOS
Q Output Current		8mA(VDD=2.7V)
Q Output Load (Drive Capacity)	$2.25\text{V} \leq \text{VDD} \leq 2.75\text{V}$	30pF ( $\leq 107\text{MHz}$ )
		50pF ( $\leq 67\text{MHz}$ )
	$2.7\text{V} \leq \text{VDD} \leq 3.6\text{V}$	15pF ( $\leq 125\text{MHz}$ )
		30pF ( $\leq 107\text{MHz}$ )
	$4.5\text{V} \leq \text{VDD} \leq 5.5\text{V}$	50pF ( $\leq 70\text{MHz}$ )
		15pF ( $\leq 125\text{MHz}$ )
		30pF ( $\leq 100\text{MHz}$ )
		50pF ( $\leq 50\text{MHz}$ )

## Device Selection Table

Version	Oscillation frequency (3rd Overtone)	
	2.25 to 3.6V	2.7 to 5.5V
KH9705ALA	30 to 40MHz	30 to 50MHz
KH9705ALB	40 to 55MHz	50 to 70MHz
KH9705ALC	55 to 75MHz	65 to 100MHz
KH9705ALD	75 to 100MHz	95 to 125MHz
KH9705ALE	90 to 107MHz	100 to 133MHz

## PAD Locations



Chip Size	0.80x0.80mm
PAD Size	90x90um
Chip Thickness	200±20um
Chip Base	VSS Level

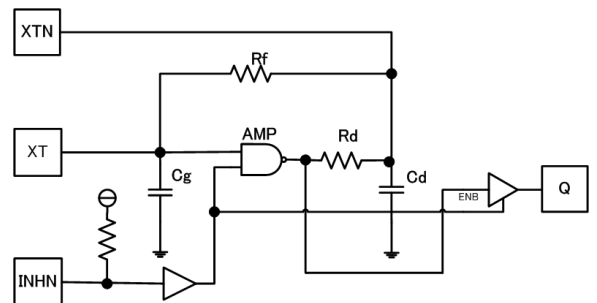
## Reliability

Test Model		Performance Values
ESD	HBM	>4000V
	MM	>400V
	FI-CDM	>1000V
Latch-up	Current Test	>200mA
	Voltage Test	>8.3V

Notes: The document is a brief data sheet of the product.

Please contact with us by email for detailed data sheet, when needed.

## Block Diagram



## Output waveform

125MHz CL=15pF VDD=3.0V

